



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/816,217

04/01/2004

Nicholas A. J. Millington

PA3445US

7302

22830

7590

01/18/2008

CARR & FERRELL LLP
2200 GENG ROAD
PALO ALTO, CA 94303

EXAMINER

NICKERSON, JEFFREY L

ART UNIT

PAPER NUMBER

4117

MAIL DATE

DELIVERY MODE

01/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/816,217	Applicant(s) MILLINGTON, NICHOLAS A. J.	
	Examiner JEFFREY NICKERSON	Art Unit 4117	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>29 August 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 1-6,9,10,19,20,31,33,65,66,86,91,109-114,117,118,121,127,128,138,139,141,156,201,202,206,218,219,221,229,233,244 and 549-576.

Continuation of Disposition of Claims: Claims rejected are 1-6,9,10,19,20,31,33,65,66,86,91,109-114,117,118,121,127,128,138,139,141,156,201,202,206,218,219,221,229,233,244 and 549-576.

DETAILED ACTION

1. This communication is in response to Application No. 10/816,217 filed on 1 April 2004. The preliminary amendment presented on 21 November 2005, which cancels claims 7-8, 11-18, 21-30, 32, 34-64, 67-85, 87-90, 92-108, 115-116, 119-120, 122-126, 129-137, 140, 142-155, 157-200, 203-205, 207-217, 220, 222-228, 230-232, 234-243, 245-548, provides change to claims 1, 3, 5-6, 9-10, 19-20, 65, 86, 91, 109, 111, 113-114, 117-118, 121, 127-128, 138-139, 141, 156, 201-202, 206, 218-219, 221, 229, 233, 244, and adds claims 549-576 is hereby acknowledged. Claims 1-6, 9-10, 19-20, 31, 33, 65-66, 86, 91, 109-114, 117-118, 121, 127-128, 138-139, 141, 156, 201-202, 206, 218-219, 221, 229, 233, 244, 549-576 have been carefully examined in view of submitted accelerated examination support documents including the limitation(s) in the claim(s) that are disclosed by the corresponding cited reference(s) and applicant's explanation of how each of the claims are allegedly patentable over the references cited in the provided information disclosure statement (IDS). In view of additional pertinent references cited by examiner and applied as basis for the following rejection(s), examiner finds that there are no issues (as reflected in this office action) that necessarily warrant a telephone/personal interview to discuss/resolve. Furthermore, in view of the multiple references (which presumably the applicant is unaware of) upon which the following rejection(s) is/are based, examiner finds that there are no issues that must possibly be addressed and/or solve via an interview, particularly without

providing the applicant the necessary time to review and considered the additional references cited by examiner. However, the application is being treated under accelerated examination under 37 C.F.R. 1.102, as such upon applicant's full consideration of the hereby cited references, examiner remains open to an interview upon request to discuss any possible issue/concern and/or any possible amendment or submission to resolve any issue(s) identified by applicant (see MPEP 708.02 VIII Prosecution Procedure (A)-(E)).

Priority

2. The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original non-provisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 60/490,768, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. A certified copy of the provisional application to which priority is claimed has not been received by the Office. As such, all enablement rejections made herewith are based solely upon the current application's specification and not in view of provisional application No. 60/490,768.

The applicant may possibly overcome rejections/objections by providing a certified copy of the provisional application and distinctly pointing out the sections contained within the provisional that support the subject matter claimed or amended into the current application.

Response to Amendment

3. The amendment filed 21 November 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

a. The introduction of “visual” or “audiovisual” information being processed by the system. The original filed disclosure focuses on processing “audio” information and **only mentions video processing as a consideration in how to delay the playing of the audio information by the system.** The disclosure specifically suggests that the **video information is being processed independently of the current audio system invention**, and does not support the invention handling visual tracks or audiovisual tracks, as added into the specification and in claims 570 and 571. (Pg 55, line 12-26)

b. The introduction of possible components in an audio reproduction device. While the original specification provides support for an external amplifier managed by the zone player (zone player to external amp to audio reproduction

device), it does not provide support for “external amplifiers”, “speakers”, “other devices that change electrical signals into sound” or “visual displays” such as “cathode ray tubes” managed by the audio reproduction device (zone player to audio reproduction device to external amp) as added in the specification. (Pg 54, line 1-9)

c. The introduction of possible uses for embodiments of the inventions.

While the original specification provides support for the system being operable in rooms, houses, offices, amphitheatres, and auditoriums, it does not provide support for being used in “motorized vehicles”, “airplanes”, “jets”, “boats”, “yachts” or “ships” as added in the specification. (Pg 6, lines 1-18)

d. The introduction of how status information is conveyed by the display of the user interface module. The original specification only provides support for the user interface module displaying “status information”. It does not discuss how this information should be displayed, or that it should “display visual images representative of the tasks being performed”, as added in claim 559. (Pg 12, line 25 – pg 13, line 15)

e. The introduction of further interaction components of the user interface. The original specification does provide for a “motion sensor” or a “scroll wheel” as added in claims 560 and 561. (Pg 12, line 25 – pg 13, line 15)

f. The introduction of the audio information being in a WMA format. The original specification provides support for the use of MP3 and WAV formats, but not for the WMA format, as added in claim 569. (pg 48, line 20 – pg 49, line 12)

g. The introduction of the audio information source being an Apple iPod. The original specification provides support for the use of CDs players, radio receivers, record turntables, PCs and PDAs, but does not provide support for the source being an Apple iPod, as added in claim 572. (Pg 6, line 19 – pg 7, line 6)

Applicant is required to cancel the new matter in the reply to this Office Action.

4. Claims that have been cancelled by amendment, however, are not objected to at all.

Specification

5. Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The abstract of the disclosure is objected to because it contains implied phraseology. The phrase “is described” falls under the category of implied phraseology and should be deleted. Correction is required. See MPEP § 608.01(b).

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

8. Claims 86, 91, 127, 139, 229, 555, 556, and 562 are objected to due to the following noted minor informality: lack of antecedent basis.

Regarding claim 86, the limitation “the synchrony group” is recited in line 9. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

Regarding claim 91 the limitation “the member device’s clock rate” is recited in line 2. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

Regarding claim 127, the limitation “the function” is recited in line 3. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

Regarding claim 139, the limitation “the clock rate of a member device” is recited in line 3. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

Regarding claim 229, the limitations “the device’s synchrony group” and “the synchrony group” are recited in lines 2-4. There is insufficient antecedent basis for these limitations in the claim. Correction is required.

Regarding claim 555, the limitation “the synchrony group” is recited in line 2. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

Regarding claim 556, the limitation “the user interface module” is recited in line 2. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

Regarding claim 562, the limitation “the performance” is recited in line 2. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 559-561 and 569-572 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

These claims contain limitations that were added in a preliminary amendment and were not supported by the original disclosure. See ***Response to Amendment*** section above for new matter reasoning.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 109, 562 and 563 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 109, the limitation "associating each of the tasks with a time stamp" is immediately followed by the limitation "indicating a time, relative to a clock maintained by a task source device, at which the devices comprising the synchrony group are to execute the respective tasks". The second limitation quoted is a slightly narrower limitation compared to the first limitation quoted. However, the second limitation reads upon the first limitation, and though it appears applicant is attempting to distinguish between the time stamp and an indicated time, without proper definition of each within the claim, it results in confusion. There is no indication as to what devices are performing these respective steps and how time stamps differ from an indicated execution time.

Regarding claim 562, the phrase "without appreciable delay the performance of the tasks in synchrony" is confusing and does not make sense. For purposes of further examination the examiner will consider this to read "without appreciable delay that would affect performance of the tasks in synchrony".

Regarding claims 562 and 563, the limitation "appreciable delay" is indefinite and relative. The disclosure provides no definition of the term and/or indicates to the quantitative limitations on how long a delay must be before it would qualify as an "appreciable" one. For purposes of further examination the examiner will consider any synchronization task that takes delay into consideration while processing to meet this limitation.

Claim Rejections - 35 USC § 101

13. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

14. Claims 218, 219, 221, 229, 233, and 244 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 218, computer-related inventions whether descriptive or functionally descriptive material are non-statutory categories when claimed as descriptive material *per se* (see *Warmerdam*, 33 F.3d at 1360 USPQ2d at 1759), falling under the “process” category (i.e. inventions at that consist of a series of steps or acts to be performed). See 35 U.S.C. 100(b) (“The term process means, art, or method, and includes a new of a known process, machine, manufacture, composition of matter or material”). Functional descriptive material: “data structures” representing descriptive material *per se* or computer program representing computer listing *per se* (i.e. software *per se*) when embodied in a computer-readable media are still not statutory because they are not capable of causing functional change in the computer. However, a claimed computer-readable *storage* medium encoded with a data structure, computer listing or computer program, having defined structural and functional interrelationships between the data

structure, computer listing or computer program and the computer software and hardware component, which permit the data structure's, listing or program's functionality to be realized, is statutory (see MPEP §2106). In this case, the applicant is making claim to a "computer program comprising a computer readable medium", which is either inherent (if the computer readable medium is not tangible, and therefore not statutory) or impossible (if the computer readable medium is tangible). The examiner recommends changing the preamble to read: "A computer-readable storage medium comprising a computer program ..." in an effort to change the claim to statutory subject matter.

Regarding claims 219, 221, 229, 223, and 244, these claims inherit the non-statutory subject matter their parent claim contains.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

16. Claims 1-4, 31, 65-66, 91, 109-112, 118, 121, 139, 156, 201-202, 206, 218-219, 221, 244, 557, 562-563, 565-568, 570-571, 575, and 576 are rejected under 35 U.S.C. 102(a) as being anticipated by Jo et al ("Synchronized one-to-many media streaming with adaptive playout control", 10 December 2002).

Regarding claim 1, Jo teaches a system comprising a plurality of devices, one of the devices operating as a task source device and at least one other device operating as a member of a synchrony group, (Jo: Figure 1 depicts a server distributing media for playback to multiple clients)

the task source device being configured to distribute a series of tasks to the synchrony group, (Jo: Section 2.1 specifies the system is for scheduling audio/video streams to multiple clients, using, for example, MPEG-2 or MPEG-4) each task being associated with a time stamp indicating a time, relative to a clock maintained by the task source device, at which the devices comprising the synchrony group are to execute the respective task. (Jo: Section 2.1 specifies the streams could be MPEG-2; section 2.2 specifies these inherently have a Presentation TimeStamp (PTS) in the header)

Regarding claim 2, Jo teaches a system in which the synchrony group comprises a plurality of member devices. (Jo: Figure 1 depicts multiple clients)

Regarding claim 3, Jo teaches a system in which each device comprising a member of the synchrony group is further configured to execute each task that it receives from the task source device at the determined time. (Jo: Section 2.2 specifies a PTS and executing playback based on the PTS)

Regarding claim 4, Jo teaches a system in which the member devices are configured to execute the respective tasks in synchrony. (Jo: Section 2.4 specifies the objective of inter-client synchronization)

Regarding claim 31, Jo teaches a system in which at least one member device is further configured to adjust its clock rate. (Jo: abstract specifies the adjustment of the playback rate of the clients)

Regarding claim 65, Jo teaches a device for executing a series of tasks provided by a task source at times specified by the task source in relation to a clock maintained by the task source, (Jo: abstract specifies the playback of media using a target presentation time specified by the server) the device comprising:

an interface module (receiver buffers) configured to receive the series of tasks
(Jo: section 2.2 specifies the clients have receiver buffers; See also Figure 1);

a current time retrieval module (scheduler) configured to obtain from the task source a current time value (Jo: section 2.1 specifies the possible use of NTP for employing tightly synced playback, which inherently retrieves current time information);

an execution time determination module (scheduler) configured to determine a time at which the task is to be executed (Jo: section 2.2 specifies the scheduler controls playback so that the presentation time is met; See also Figure 1);

and a task execution module (streaming media applications) configured to execute each respective task (Jo: section 1 specifies streaming media applications are controlling execution at the clients; See also Figure 1).

Regarding claim 66, Jo teaches a device further including a control module (controller) for controlling the execution of commands received by the said interface module. (Jo: section 2.2 specifies the controller acting in conjunction with the scheduler to execute the tasks on time; See also Figure 1)

Regarding claim 91, this device claim comprises limitations substantially similar to that of claim 31 and the same rationale of rejection is used, where applicable.

Regarding claim 109, Joe teaches a method of operating a system comprising the steps of:

associating each of the tasks with a time stamp (Jo: section 2.2 specifies using a presentation timestamp);

indicating a time, relative to a clock maintained by a task source device, at which devices comprising the synchrony group are to execute the respective tasks. (Jo: section 2.2 specifies the server using a presentation timestamp in the headers)

Regarding claim 110, this method claim comprises limitations substantially similar to that of claim 2 and the same rationale of rejection is used, where applicable.

Regarding claim 111, this method claim comprises limitations substantially similar to that of claim 3 and the same rationale of rejection is used, where applicable.

Regarding claim 112, this method claim comprises limitations substantially similar to that of claim 4 and the same rationale of rejection is used, where applicable.

Regarding claim 118, Jo teaches a method in which the task source device is configured to distribute tasks to the member devices using a selected multi-cast transmission methodology. (Jo: abstract)

Regarding claim 121, Jo teaches a method further comprising the step of controlling the series of tasks to be distributed by the task source device. (Jo: section 2.4 specifies the

use of client feedback using RTCP signaling to provide some server sided control of distribution)

Regarding claim 139, this method claim comprises limitations substantially similar to that of claim 31 and the same rationale of rejection is used, where applicable.

Regarding claim 156, Jo teaches the method further comprising the step of obtaining information associated with the tasks from a single information source. (Jo: Figure 1 depicts the information coming from one server. See also Figure 6, the simulation uses one streaming server.)

Regarding claim 201, Jo teaches a method for operating a device comprising the steps of:

- obtaining a series of tasks; (Jo: section 2.2 specifies the server can obtain the streams from MPEG-2 programs)

- determining a time at which each respective task is to be executed; (Jo: section 2.2 specifies the PTS exists in the frame, which inherently means the sender put it there)

- transmitting the series of tasks from the device to at least one other device. (Jo: abstract)

Regarding claim 202, this method claim comprises limitation substantially similar to that of claim 118 and the same rationale of rejection is used, where applicable.

Regarding claim 206, Jo teaches the method wherein in which the series of tasks includes a series of task sequences. (Jo: section 2.2 specifies the streams are multiplexed audio and video which are sequenced with sequence numbers)

Regarding claim 218, this computer program claim comprises limitation substantially similar to that of claim 65 and the same rationale of rejection is used, where applicable.

Regarding claim 219, this computer program claim comprises limitation substantially similar to that of claim 66 and the same rationale of rejection is used, where applicable.

Regarding claim 221, this computer program claim comprises limitation substantially similar to that of claim 206 and the same rationale of rejection is used, where applicable.

Regarding claim 244, this computer program claim comprises limitation substantially similar to that of claim 31 and the same rationale of rejection is used, where applicable.

Regarding claim 553, Jo teaches the system wherein the clock rate of the at least one member device is adjusted in relation to a clock rate value maintained by the task

source device's clock. (Jo: section 2.1, specifies the task source adjusts its target presentation time and then distributes it, which results in the member devices adjusting their playback rates; See also section 2.2)

Regarding claim 557, Jo teaches a system for synchronizing operations among a plurality of digital data processing devices (Jo: abstract) comprising:

- at least one task distribution device (server) configured to distribute tasks over a network (Jo: abstract; Figure 1, Server);

- at least one member device configured to perform the tasks in synchrony (Jo: abstract; Figure 1, clients).

Regarding claim 562, Jo teaches the system wherein the task distribution device is further configured to enable the at least one member device to initiate without appreciable delay the performance of the tasks in synchrony. (Jo: abstract)

Regarding claim 563, Jo teaches the system wherein the task distribution device is further configured to allow one or more additional member devices to join without appreciable delay or disengage without appreciable delay the at least one member device's synchronous performance. (Jo: section 2.1 specifies clients can join through the PIM-SM routing)

Regarding claim 565, Jo teaches the system wherein the at least one distribution device is independently clocked. (Jo: section 2.4, specifies the use of server aided playback adjustment; section 2.4, description of figure 5 specifies using the server time information to guide the local client time information.)

Regarding claim 566, Jo teaches the system wherein the at least one member device is independently clocked. (Jo: section 2.3 specifies the client can perform local playback adjustment without timing information from the server)

Regarding claim 567, Jo teaches wherein each of the tasks is associated with a time stamp relative to a clock maintained by the at least one task distribution device. (Jo: section 2.2 specifies the use of a timestamp)

Regarding claim 568, Jo teaches wherein the tasks comprise audio tracks. (Jo: abstract specifies audio)

Regarding claim 570, Jo teaches wherein the tasks comprise visual tracks. (Jo: abstract specifies video)

Regarding claim 571, Jo teaches wherein the tasks comprise audiovisual tracks. (Jo: abstract specifies both audio and video; Figure 1 depicts the possibility of them buffering and playing concurrently)

Regarding claim 575, Jo teaches wherein the time stamp represents when the at least one member device is to execute the task. (Jo: section 2.2 specifies the PTS is for presentation execution time)

Regarding claim 576, Jo teaches a system for synchronizing the operations among a plurality of digital data processing devices comprising a zone player (controller) residing within one or more audio reproduction devices (clients). (Jo: abstract)

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 5, 9-10, 20, 33, 86, 113-114, 117, 127-128, 141, 229, 233, and 554-555 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jo et al ("Synchronized one-to-many media streaming with adaptive playout control", 10 December 2002), and further in view of Anjum et al (US 2003/00992121 A1).

Regarding claim 5, Jo teaches the use of a server streaming media across an IP based network to multiple clients while performing at least one type of synchrony group management operation. (Jo: abstract)

Jo does not teach the use of a member device (client) operating as a master device configured to perform at least one type of synchrony group management operation.

Anjum, in a similar field of endeavor, teaches the use of a Bluetooth piconet that uses a master device to perform at least one type of synchrony group management operation. (Anjum: abstract and [0007])

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Anjum for using a specialized Bluetooth network for data communication. The teachings of Anjum, when implemented in the Jo system, will allow one of ordinary skill to operate the client and server devices in a Bluetooth network. One of ordinary skill in the art would be motivated to utilize the teachings of Anjum in the Jo system in order to use short range wireless communication as a Personal Area Network on an unlicensed radio band in a small setting.

Regarding claim 9, the Jo/Anjum system teaches comprising at least one additional device in which the master device is configured to enable the at least one addition device to join the synchrony group as a slave device. (Anjum: [0004]-[0006] specifies slaves joining, See also Figure 1)

Regarding claim 10, the Jo/Anjum system teaches in which the task source device is configured to distribute tasks to the member devices using a selected multi-cast transmission methodology. (Jo: abstract)

Regarding claim 20, the Jo/Anjum system teaches in which the master device is configured to enable the task source device to migrate from one device (slave of first piconet) to another device (master of second piconet) in the system. (Anjum: abstract specifies that a second piconet can be created with a new master acting as a task source to distribute information to second piconet)

Regarding claim 33, the Jo/Anjum system teaches in which at least one other device operates as a task source device configured to distribute tasks to a second synchrony group. (Anjum: abstract specifies that a second piconet may be created with a new master acting as a task source to manage slaves)

Regarding claim 86, the Jo/Anjum system teaches further including:

a migration information receiving module configured to receive migration information from the task source device; (Anjum: [0009] specifies migration receiving necessary by a slave)

a migration control module configured to distribute the series of tasks to the synchrony group. (Jo: abstract specifies distributing the media)

Regarding claim 113, this method claim comprises limitation substantially similar to that of claim 5 and the same rationale of rejection is used, where applicable.

Regarding claim 114, the Jo/Anjum system teaches further comprising the step of controlling a master device's distribution of status information. (Anjum: abstract)

Regarding claim 117, this method claim comprises limitation substantially similar to that of claim 9 and the same rationale of rejection is used, where applicable.

Regarding claim 127, this method claim comprises limitation substantially similar or broader to that of claim 20 and the same rationale of rejection is used, where applicable.

Regarding claim 128, this method claim comprises limitation substantially similar to that of claim 20 and the same rationale of rejection is used, where applicable.

Regarding claim 141, this method claim comprises limitation substantially similar to that of claim 33 and the same rationale of rejection is used, where applicable.

Regarding claim 229, the Jo/Anjum system teaches in which in response to control information to enable another device to become a member of the device's synchrony group, the control module enables to transmit a command to the other device to enable the other device to become a member of the synchrony group. (Anjum: [0009])

Regarding claim 233, the Jo/Anjum system teaches in which the interface module is further configured to enable the computer to transmit the tasks to at least one other device. (Anjum: [0010], Jo: abstract)

Regarding claim 554, the Jo/Anjum system teaches wherein the device operating as the task source for the first synchrony group (master of second/helper piconet), is also operating as a member device of a second synchrony group (first piconet). (Anjum: abstract)

Regarding claim 555, the Jo/Anjum system teaches wherein the migration control module is further configured to notify the members of the synchrony group that it is to thereafter operate as the task source device. (Anjum: [0025], [0032] description of step 490)

19. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jo et al ("Synchronized one-to-many media streaming with adaptive playout control", 10

Art Unit: 4117

December 2002) and Anjum et al (US 2003/00992121 A1), in further view of Powers (US 2004/0203378 A1).

Regarding claim 19, the Jo/Anjum system teaches the use of a master device managing slaves and migrating devices. However, the Jo/Anjum system does not teach the use of a master device migrating from one device to another.

Powers, in a similar field of endeavor, teaches a slave device being promoted or swapped with the master device. (Powers: abstract)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Powers for having dynamic master devices. The teachings of Powers, when implemented in the Jo/Anjum system, will allow one of ordinary skill in the art to swap master devices with slave devices when necessary or preferred. One of ordinary skill in the art would be motivated to utilize the teachings of Powers in the Jo/Anjum system in order to allow devices dynamically manage their master, if, for instance, the master leaves the network.

20. Claims 138, 564, 573, and 574 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jo et al ("Synchronized one-to-many media streaming with adaptive playout control", 10 December 2002), and further in view of Miyabe et al (US 2001/0032188 A1).

Regarding claim 138, Jo teaches a distribution system using a media server (Jo: abstract), but Jo never discloses where the media server obtains its media from.

Miyabe et al, in a similar field of endeavor, teaches wherein task source devices (Miyabe: Figure 1A, items 114, 123, and 173) obtain information associated with the tasks from at least two types of information sources. (Miyabe: Figure 1A, item 123 depicts two incoming information sources, one from item 121 and one from 131)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Miyabe for having multiple different information sources. The teachings of Miyabe, when implemented in the Jo system, will allow one of ordinary skill in the art to obtain media information from multiple outlets. One of ordinary skill in the art would be motivated to utilize the teachings of Miyabe in the Jo system in order for to allow the system to support a user who has multiple media source devices.

Regarding claim 564, the Jo/Miyabe system teaches wherein the at least one task distribution device is further configured to obtain information associated with the tasks from at least one information source. (Miyabe: Figure 1A, items 123, 121, and 131)

Regarding claim 573, the Jo/Miyabe system teaches wherein the at least one information source is an Internet broadcast. (Miyabe: [0129])

Regarding claim 574, the Jo/Miyabe system teaches wherein the at least one information source is a satellite broadcast. (Miyabe: Figure 1A, item 111 to item 112 to item 113 to item 114)

21. Claims 6, 551, and 556 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jo et al ("Synchronized one-to-many media streaming with adaptive playout control", 10 December 2002) and Anjum et al (US 2003/00992121 A1), and further in view of Tsuk et al (US 7,312,785 B2).

Regarding claim 6, the Jo/Anjum system teaches wherein the system contains a master device, however, their system does not teach a user interface on the device.

Tsuk, in a similar field of endeavor, teaches the system further including a user interface module configured to control the master device. (Tsuk: abstract, Figure 7B)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Tsuk for iPods with user interfaces. The teachings of Tsuk, when implemented in the Jo/Anjum system, will allow one of ordinary skill in the art to use an iPod as any one of the devices in the system. One of ordinary skill in the art would be motivated to utilize the teachings of Tsuk in the Jo/Anjum system in order to provide the user with easy interaction interfaces to control the system.

Regarding claim 551, the Jo/Anjum/Tsuk system teaches wherein the master device is further configured to provide status information related to the status of the synchrony group to the user interface module. (Tsuk: col 3, lines 35-54)

Regarding claim 556, this method claim comprises limitations substantially similar to that of claim 551 and the same rationale of rejection is used, where applicable.

22. Claims 558-561 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jo et al ("Synchronized one-to-many media streaming with adaptive playout control", 10 December 2002), and further in view of Tsuk et al (US 7,312,785 B2).

Regarding claim 558, the Jo system teaches wherein the system controls one or more synchrony groups but does not teach an interface module.

Tsuk, in a similar field of endeavor, teaches the system further including a user interface module configured to control the synchrony groups. (Tsuk: abstract, Figure 7B)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Tsuk for iPods with user interfaces. The teachings of Tsuk, when implemented in the Jo system, will allow one of ordinary skill in the art to use an iPod as any one of the devices in the system. One of ordinary skill in the art would be motivated to utilize the teachings of Tsuk in the Jo/Anjum system in order to provide the user with easy interaction interfaces to control the system.

Regarding claim 559, the Jo/Tsuk system teaches wherein the user interface module is further configured to display visual images representative of the tasks being performed in synchrony. (Tsuk: col 3, lines 35-54)

Regarding claim 560, the Jo/Tsuk system teaches wherein the user interface module further comprises a motion sensor (scroll wheel) configured to activate the user interface module when moved by a user. (Tsuk: col 15, line 63—col 16, line 12)

Regarding claim 561, the Jo/Tsuk system teaches wherein the user interface module further comprises a scroll wheel for selection of tasks (Tsuk: col 13, lines 32-47) to be performed in synchrony (Jo: abstract).

23. Claim 572 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jo et al ("Synchronized one-to-many media streaming with adaptive playout control", 10 December 2002) and Miyabe et al (US 2001/0032188 A1), and further in view of Tsuk et al (US 7,312,785 B2).

Regarding claim 572, the Jo/Miyabe system teaches information devices, but not one being an Apple iPod.

Tsuk, in a similar field of endeavor, teaches wherein the device is an Apple iPod. (Tsuk: Figure 7B)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Tsuk for using iPods as the devices. The teachings of Tsuk, when implemented in the Jo/Miyabe system, will allow one of ordinary skill in the art to use an iPod as any one of the devices in the system. One of ordinary skill in the art would be motivated to utilize the teachings of Tsuk in the Jo/Miyabe system because iPods are widely available, popular, and a commercial success.

24. Claim 552 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jo et al ("Synchronized one-to-many media streaming with adaptive playout control", 10 December 2002) and Anjum et al (US 2003/00992121 A1), in further view of Lo et al (US 6,031,818).

Regarding claim 552, the Jo/Anjum system teaches wherein the system retransmits data in a multicast fashion, and not selective unicast.

Lo, in a similar field of endeavor, teaches the system wherein the task source device is enabled to transmit at least one previously distributed task to the slave device using a selected unicast transmission methodology. (Lo: col 8, lines 14-54)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Lo for using selective unicast retransmission. The teachings of Lo, when implemented in the Jo/Anjum system, will allow one of ordinary skill in the art to retransmit lost packets to member devices with

unicast methodology. One of ordinary skill in the art would be motivated to utilize the teachings of Lo in the Jo/Anjum system in order to conserve bandwidth and reduce traffic.

25. Claim 569 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jo et al ("Synchronized one-to-many media streaming with adaptive playout control", 10 December 2002).

Regarding claim 569, Jo teaches wherein the tasks are audio tracks, but does not explicitly state they could be in the WMA format.

An official notice is taken that such use of the WMA format for audio files is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize any known and commonly used audio formats for audio files because it would have enabled practicing Jo's invention.

26. Claims 549 and 550 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jo et al ("Synchronized one-to-many media streaming with adaptive playout control", 10 December 2002), and further in view of Flood (US 7,007,106 B1).

Regarding claim 549, Jo teaches obtaining from the task source device an indication of a presentation time stamp and when to execute a task. Jo does not teach wherein the

member device obtains the current time value of the task source device's clock on a periodic basis.

Flood, in a similar field of endeavor, teaches wherein the member device periodically obtains the task source device's clock information. (Flood: col 18, lines 22-35)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Flood for distributing the current time information on a periodic basis. The teachings of Flood, when implemented in the Jo system, will allow one of ordinary skill in the art to ensure the member devices were always aware of the task source device's current time information by updating on regular intervals. One of ordinary skill in the art would be motivated to utilize the teachings of Flood in the Jo system in order to update member devices of the task source's current time, which would ensure tighter synchronization.

Regarding claim 550, the Jo/Flood system teaches wherein each member device is further configured to determine, from the time stamp associated with each respective task and a time differential value representing the difference between the current time value indicated by the task source device's clock, and a current time value indicated by its respective clock, a time, relative to its respective clock, at which it is to execute the task. (Flood: col 10, lines 50-63 specify calculating the offset between master and slave time and then processing the task based on a received time stamp and using this computed offset).

Cited Pertinent Prior Art

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Huang et al ("A synchronization infrastructure for multicast multimedia at the presentation layer", August 1997) discloses a system for multimedia multicasting with inter-client synchronization.
- b. Ishibashi et al ("A group synchronization mechanism for live media in a multicast communications", 1997) discloses a system for multimedia multicasting with inter-client synchronization.
- c. Ishibashi et al ("A group synchronization mechanism for stored media in multicast communications", 1997) discloses a system for multimedia multicasting with inter-client synchronization.
- d. Anttila et al (US 2003/0126211 A1) discloses a media multicasting synchronization system.
- e. Kang et al (US 2002/0090914 A1) discloses a piconet system with dynamic master/slave configurations.
- f. Kim et al (US 6,836,788 B2) discloses a method for distributing media via multicasting trees with RTP.
- g. Liou et al (US 2002/0112244 A1) discloses a system for synchronous media distribution using collaboration.

Art Unit: 4117

- h. Moller (US 6,009,457) discloses a system for real-time audio distribution.
- i. Russell (US 6,934,766 B1) discloses a method and apparatus for synchronizing playback by considering network lag.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beatriz Prieto can be reached on 571-272-3902. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./
Jeffrey Nickerson
Patent Examiner

/Prieto, Beatriz/
Supervisory Patent Examiner, Art Unit 4117